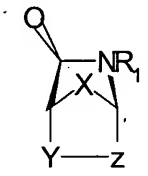
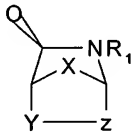
We claim:

1. A process for the preparation of optically active azabicyclo heptanone derivative of general formula III wherein R_1=H, X=CH_2 Y-Z = -CH=CH-



Formula III

which comprises reacting (±)2-aza-bicyclo[2,2,1]hept-5-en-3-one of formula I

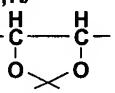


Formula I

Wherein R_1=H, COR_2 (R_2=C_{1-4} alkyl,C_{1-4} alkoxy,aryl,aryloxy)

X=O,CHR_3 (R_3=F,OH,Br,H)

Y-Z=-CH=CH-,CH_2-CH_2,



—CH-CH_2—(R_4=Br,OH,$PhCH_2O$,F,N_3)

R4

with an enzyme or whole cell in a buffer containing organic solvent at temperature ranging between 25-30°C for a period ranging from 10-24 hr., extracting the mixture with an organic solvent, separating the organic layer, and removing the solvent.

2. A process as claimed in claim 1 wherein the microorganism or enzyme used is from the *Bacillus, Klyuvera or Escherichia.*
3. A process as claimed in claim 1 wherein the whole cell comprises a whole cell of *Klyuvera Citrophila* ATCC No.21285.
4. A process as claimed in claim 1 wherein the cell extract or enzyme used comprises enzyme or cell extract from *Klyuvera sp.* (ATCC No.21285).
5. A process as claimed in claim 1 wherein the buffer used is selected from the group consisting of phosphate buffer (0.05 M – 0.1 M, 6-8 pH), citrate buffer (0.05 M – 0.1 M 6-7.5 pH) and Trisbuffer (0.05M- 0.2M, 7-8 pH).

6. A process as claimed in claim 1 wherein the buffer used comprises phosphate buffer (0.2 M, 7.4 pH).
7. A process as claimed in claim 1 wherein the organic solvent used along with buffer is selected from the group consisting of alcohols, alkyl acetates, ketones and sulfoxides.
8. A process as claimed in claim 7 wherein the organic solvent is selected from the group consisting of methanol, ethanol, butanol, ethyl acetate, acetone, dimethyl sulfoxide and dimethyl formamide.
9. A process as claimed in claim 7 wherein the organic solvent comprises acetone.
10. A process as claimed in claim 1 wherein the percent of organic solvent used for the reaction along with buffer is in the range of 5% to 50%(v/v).
11. A process as claimed in claim 1 wherein the percent of organic solvent used for the reaction along with buffer comprises is 10 %(v/v).
12. A process as claimed in claim 1 wherein the solvent used for extraction comprises a chlorinated solvent selected from the group consisting of chloroform, ethylene dichloride, methylene dichloride and an alkyl acetate.
13. A process as claimed in claim 12 wherein the alkyl acetate used for extraction comprises ethyl acetate.
14. A process as claimed in claim 12 wherein the solvent used for extraction comprises methylene chloride.
15. A process as claimed in claim 1 wherein the yield of (-) 2-Azabicyclo[2,2,1]-hept-5-ene-3-one is 39.3% and the optical purity is 98%.

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